



**RE: EXTERNAL: Re: FW: The Dalles Field Report**

**Bath, Bill** to: Harry Craig

"Owens, Brad W", "Goins, Doug", "Matsushita, Gene S", "Lynden Peters (Lynden.Peters@arcadis-us.com)", Mary Queitzsch, Emerald Laija, Linda Meyer, Christy Brown

10/22/2012 04:26 PM

Doug Goins spoke with Mary Queitzsch last week and requested an extension to this upcoming Friday, Oct 27. My understanding is that Mary granted the extension after speaking with you.

Bill Bath  
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From: Craig.Harry@epamail.epa.gov [  
mailto:Craig.Harry@epamail.epa.gov]  
Sent: Monday, October 22, 2012 5:10 PM  
To: Bath, Bill  
Cc: Owens, Brad W; Goins, Doug; Matsushita, Gene S; Lynden Peters (Lynden.Peters@arcadis-us.com); Queitzsch.Mary@epamail.epa.gov; Laija.Emerald@epamail.epa.gov; Meyer.Linda@epamail.epa.gov; Brown.Christy@epamail.epa.gov  
Subject: EXTERNAL: Re: FW: The Dalles Field Report

Bill,

What's the status of the submission on the air sampling data?

Harry

▼ "Bath, Bill" ---10/09/2012 09:21:50 AM---Harry- The SAP stated that we will submit the name of the proposed 3rd party data validation firm to

From: "Bath, Bill" <[bill.bath@lmco.com](mailto:bill.bath@lmco.com)>  
To: Harry Craig/R10/USEPA/US@EPA  
Cc: "Matsushita, Gene S" <[gene.s.matsushita@lmco.com](mailto:gene.s.matsushita@lmco.com)>, "Owens, Brad W" <[brad.w.owens@lmco.com](mailto:brad.w.owens@lmco.com)>, "Goins, Doug" <[doug.goins@lmco.com](mailto:doug.goins@lmco.com)>, "Lynden Peters (Lynden.Peters@arcadis-us.com)" <[Lynden.Peters@arcadis-us.com](mailto:Lynden.Peters@arcadis-us.com)>, Mary Queitzsch/R10/USEPA/US@EPA  
Date: 10/09/2012 09:21 AM  
Subject: FW: The Dalles Field Report

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Harry- The SAP stated that we will submit the name of the proposed 3rd party data validation firm to EPA. The data validation firm is Trillium. Also, based on Arcadis's Sept 28th receipt of unvalidated lab data, the report will be delivered to EPA on October 19.

See attached e-mail for additional details.

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From: Peters, Lynden [<mailto:Lynden.Peters@arcadis-us.com>]  
Sent: Tuesday, October 09, 2012 8:00 AM  
To: Bath, Bill  
Cc: Florom, Donna; Armstead II, Gary  
Subject: EXTERNAL: The Dalles Field Report

Bill,  
ARCADIS received the final EDD/laboratory data package from our field sampling effort at The Dalles on Friday, September 28th. In accordance with the approved SAP, we will be submitting the draft field sampling/monitoring report to LMC for delivery to the EPA on Friday, October 19th (21 days after receipt of the last data package).  
In accordance with the approved SAP, an independent 3rd party firm has been contracted for laboratory data validation. The firm chosen was Trillium, Inc., and information regarding their services is provided below. Resumes of key personnel are also included with this email.  
Please let me know if you have any questions regarding either of these two topics.  
Thank you,  
Lynden

Lynden Peters, PE, PG, PMP | Certified Project Manager | [lynden.peters@arcadis-us.com](mailto:lynden.peters@arcadis-us.com)

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Please consider the environment before printing this email.

Trillium, Inc. is an environmental consulting firm which

specializes in environmental and forensic chemistry. Trillium provides consulting services in environmental chemistry. Areas of expertise include environmental data interpretation and evaluation, litigation support, data validation, and quality assurance/quality control. Trillium's personnel have experience managing industrial research and development and commercial environmental analytical laboratories, teaching at the university level, developing analytical methods, collecting samples in the field, analyzing samples in the laboratory, and performing field and laboratory quality assurance functions. This experience, coupled with our academic credentials, makes us uniquely qualified to select the most appropriate program to address your environmental chemistry and quality assurance concerns.

Trillium's capabilities include, but are not limited to, the following:

- Expert Witness Services - Trillium has been retained by numerous law firms as the environmental chemistry expert witness. Clients have included individuals, banks, insurance companies, and industry. Included in Trillium's litigation services are expert consulting services, expert report preparation, affidavit preparation, forensic capabilities, preparation of cross examination questions, preparation of graphics for trial use, deposition testimony, mediation presentations, and expert testimony at trial.
- Data Interpretation/Environmental Forensic Chemistry - Interpretation of analytical data includes evaluation of sample chromatograms, review of historical data and past site uses, identification of chemical degradation and biological degradation products, identification of tentatively identified compounds, identification of data artifacts, and determination of the age of a chlorinated solvent (1,1,1-trichloroethane) found in groundwater.
- Planning - Trillium can plan an entire sampling and analysis project, from recommending laboratories which can generate quality data using methods appropriate for meeting the project's data quality objectives, auditing the laboratory prior to and during the program, preparing a QAPP, preparing field/laboratory coordination memoranda, recommending and developing appropriate analytical methods, coordinating with and providing technical advice to the sampling team and laboratory, performing field sampling audits, validating the analytical data generated, assessing the usability of the data, and determining if the project's data quality objectives have been met.

- Data Validation - Trillium performs validation of laboratory analytical data packages pursuant to current U.S. Environmental Protection Agency (EPA) National Functional Guidelines, as well as EPA regional guidance documents, the analytical methodology, and laboratory standard operating procedures. Professional judgment is applied as necessary and appropriate. Detailed validation reports, including data summary forms and annotated Form Is, are provided. Analysis parameters include volatile and semivolatile organic compounds, pesticides/PCBs, metals and cyanide, herbicides, dioxins/furans, and classical wet chemistry analytes in water, soil, air, solid and biota matrices. Trillium personnel are familiar with all U.S. EPA analytical methodologies, including but not limited to, Contract Laboratory Program Statements of Work, SW-846 and drinking water methods.
- Data Usability - With environmental analyses, contractual compliance with the specifications of the method employed is not the primary concern of the data evaluation process. Historically, it has been observed that contractually compliant data are not always technically usable and that contractually noncompliant data are sometimes very usable. Through Trillium's extensive experience in all phases of the entire data collection, analysis, and review process, we can determine not only if the data generated are valid, but also if they meet the data quality objectives of the project. Trillium focuses on the usability of the data generated.
- Project Specific Quality Assurance/Quality Control - Trillium has developed a field/laboratory coordination memorandum to ensure that all parties involved with a sampling and analysis effort know what, why, and how each task is to be performed to ensure that the end result is useful. These memoranda also specify the appropriate type and frequency of quality control samples, analytical methodologies, analysis costs, and scheduling. If required for the needs of a particular project, these memoranda also specify development of method detection limits and practical quantitation limits.
- Quality Assurance Project Plan (QAPP) Preparation and Review - Trillium has written QAPPs for several clients and, at the request of other clients, provided comments and suggestions for improving numerous QAPPs written by others. Whether the sampling and analysis effort is small or large, a detailed QAPP is necessary for establishing the approach to managing the overall quality processes of the

environmental project. All relevant parties (client, sampling contractors, laboratories, data validators, data users) must have input regarding sampling, analysis, data evaluation, and data use for a successful QAPP to be generated.

- Information Services - Trillium can obtain project-specific literature references to provide litigation or interpretation support through online searching and full access to the Internet, as well as through traditional library research. Trillium can also obtain copies of material safety data sheets, patents, company-specific profiles and information, and historical documents. Trillium performs constant review of available environmental literature to keep current on new and innovative technology, analytical method development, and regulatory agency activity.
- Laboratory Audits - Trillium has performed onsite audits of numerous laboratories for industrial clients, attorneys, engineering firms, and potentially responsible party (PRP) groups. Audits are often requested to assess a laboratory's qualifications and capabilities to provide acceptable analytical data for a given sampling and analytical program. Other clients provide a list of laboratories to be evaluated with regard to their abilities to provide analyses on a continuing basis for varied projects.
- Performance Evaluation (PE) Samples - An excellent way to monitor a laboratory's ability to produce high quality, consistently usable data is through a double-blind PE program. Double-blind PE samples are samples that are not known by the laboratory to be PE samples. Consequently, the laboratory knows neither the identity nor the concentration of the analyte in the sample. The PE samples can be incorporated with actual samples from a given site or submitted by a fictitious client. Trillium has developed and managed several PE sample programs, including securement of the appropriate PE samples.
- Third Party Reviews - Trillium has provided independent, third party review of numerous documents for its clients. Documents reviewed include QAPPs and sampling and analysis plans to ensure that these plans adequately address all aspects of the project to be undertaken, analytical methods and EPA proposed methods to assess whether these are appropriate for and can accurately measure the components of interest, environmental and tentatively identified compounds data to ensure that analytes have been properly identified or to provide analyte identifications, proposals, site assessment reports, and

litigation opinions.

- Regulatory Agency Standard Operating Procedure Development - Trillium has been retained by state environmental regulatory agencies to develop standard operating procedures (SOP) documents to be used by environmental laboratories that wish to perform analyses of samples collected from projects located in those states. Included in each SOP were chain of custody, methods, and data package deliverables requirements
- Research - Trillium has performed environmental analytical research projects for several of its clients. These research projects have been conducted in order to develop appropriate analytical methods for the components of concern, modify existing analytical methods to generate more quantitatively accurate data, or assess the accuracy and reliability of proposed analytical methods.
- Field Laboratories - Trillium's trained personnel have performed sample analyses using gas chromatography, mass spectrometry, Fourier transform infrared spectrometry and immunoassay kits and have also provided interpretation of the analytical data generated. Innovative new (solid phase microextraction techniques) and modified methodologies are developed to address the specific needs of each project. Trillium has also provided recommendations for onsite laboratories established by our clients; these recommendations include all aspects of laboratory operation, including instruments, reagents, personnel, and other startup costs.
- Courses/Presentations - Trillium has provided numerous courses and presentations to its clients; individual members of Trillium have also served as workshop instructors at various environmental conferences. Topics of these courses and presentations have included data validation, choosing and managing environmental analytical laboratories, evaluating petroleum hydrocarbons data, environmental chemistry for the attorney nonchemist.
- Environmental Site Assessments - Trillium has provided Phase I environmental site assessments for numerous local clients. The Phase I site assessment includes a site walkthrough, title search, review of state and local environmental agency records, review of historical records, title search, review of historical aerial photographs, and preparation of a written report for its clients.

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